

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: INVUE

Report Number: P596957

Luminaire Tested: **MSA-SA2B-835-U-T4W-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596957  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-835-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6191 lumens  
Efficiency: N/A  
Efficacy: 72.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

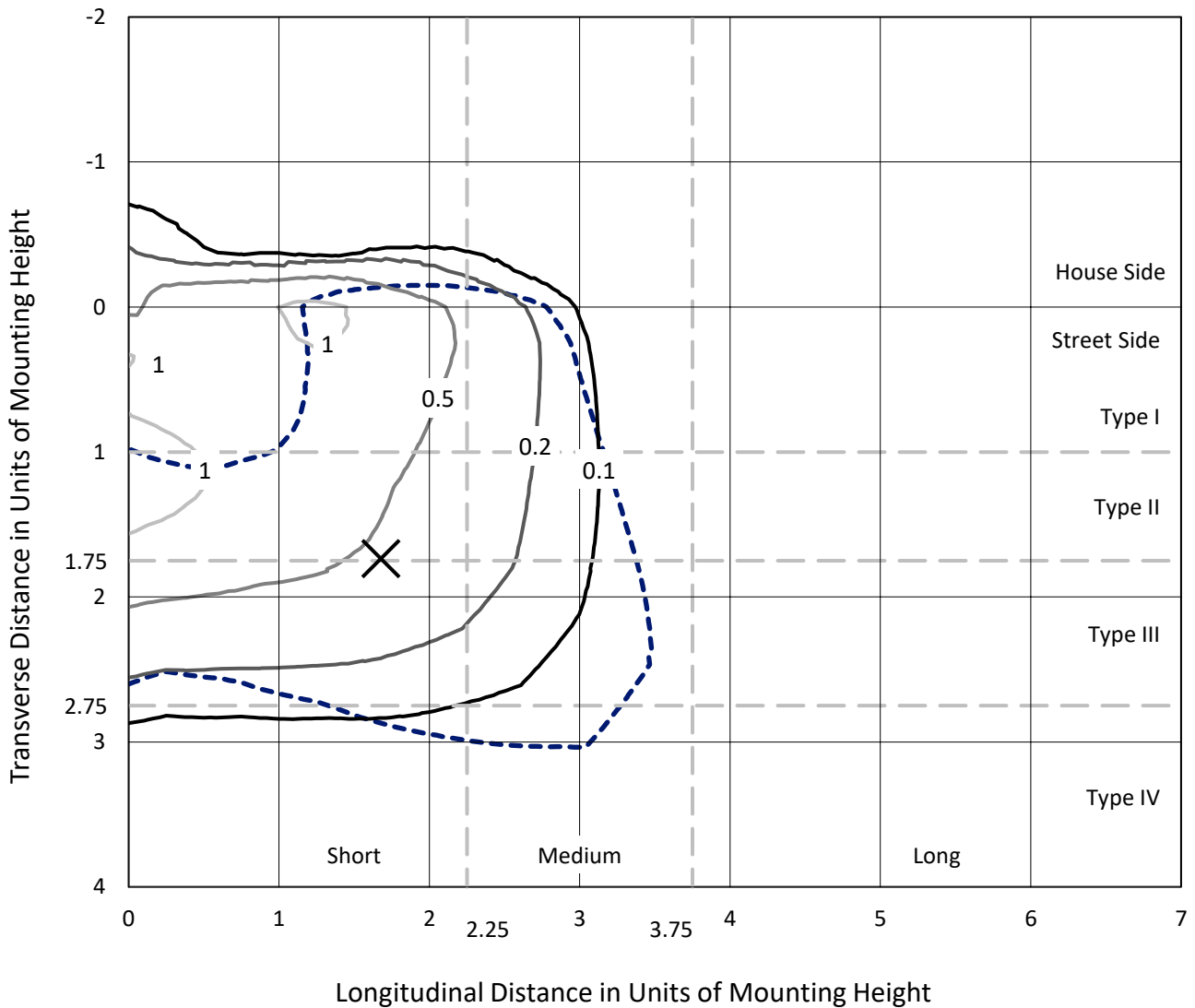
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

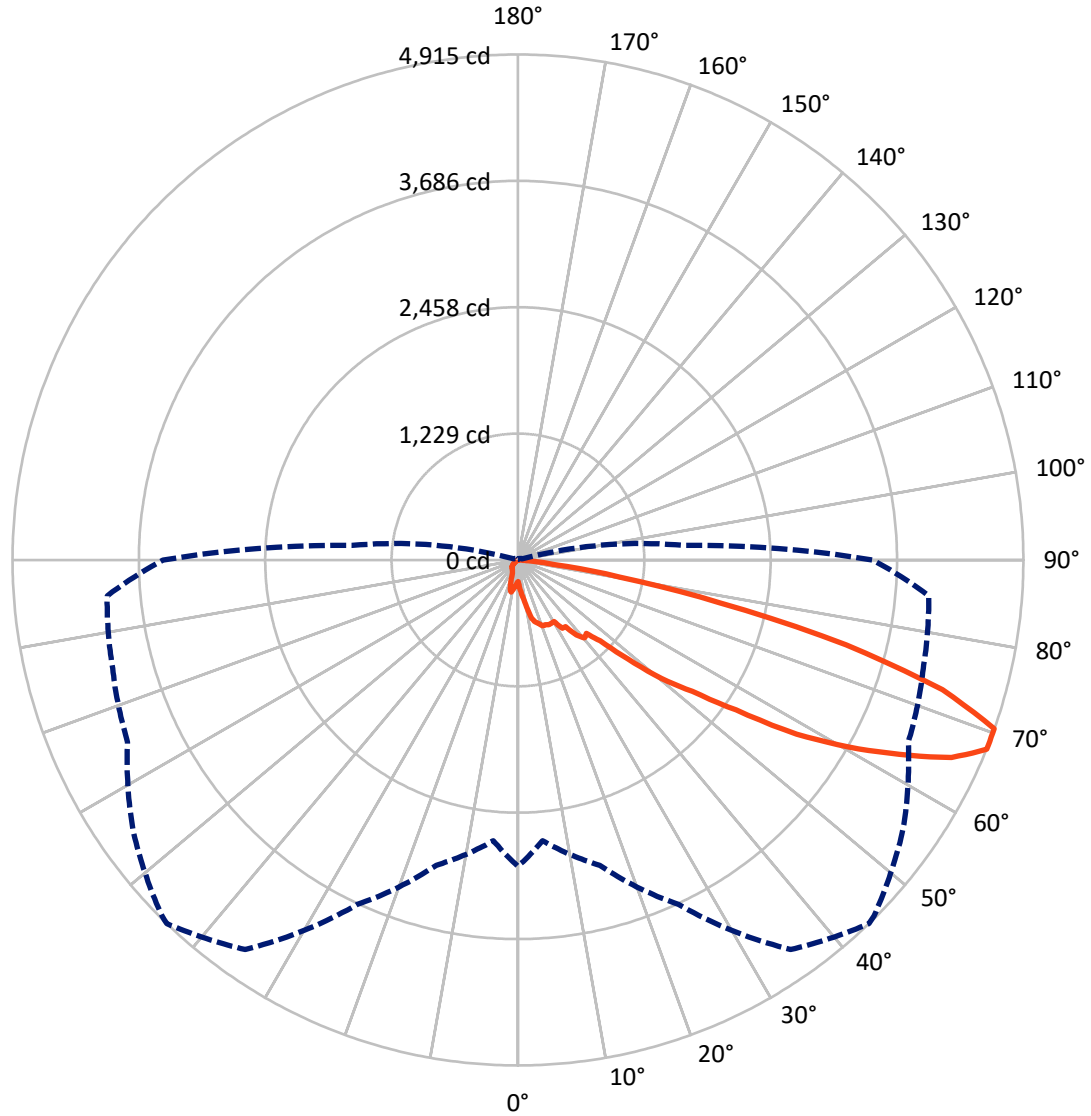
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	628.9	0.0	628.9
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	5562.1	0.0	5562.1
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	6191.0	0.0	6191.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.9	0.5
10°-20°	129.4	2.1
20°-30°	229.3	3.7
30°-40°	372.7	6.0
40°-50°	745.8	12.0
50°-60°	1530.0	24.7
60°-70°	2101.8	33.9
70°-80°	987.9	16.0
80°-90°	63.3	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	6191.0	100.0
0°-180°	6191.0	100.0

**Coefficient of Utilization**

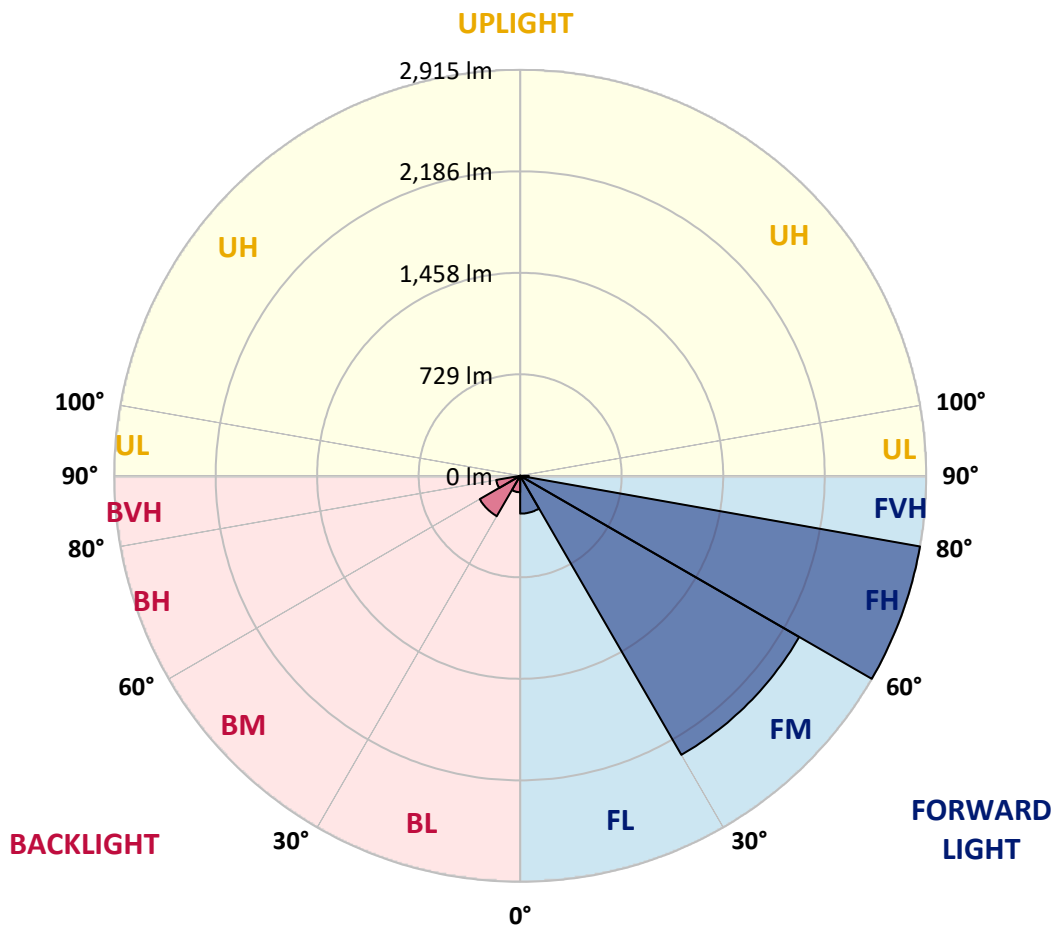


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	271.5	4.4			
FM (30°-60°)	2313.5	37.4			
FH (60°-80°)	2915.1	47.1			G2/5000
FVH (80°-90°)	62.0	1.0			G1/100
BL (0°-30°)	118.1	1.9	B1/500		
BM (30°-60°)	335.0	5.4	B1/1000		
BH (60°-80°)	174.5	2.8	B1/500		G1/500
BVH (80°-90°)	1.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6
2.5°	265.3	256.7	244.4	247.2	248.5	252.3	252.6	247.8	234.2	230.4	247.2
5°	371.8	350.9	347.2	339.3	323.6	315.1	313.1	321.6	310.7	307.2	311.7
7.5°	474.9	457.1	437.7	427.1	394.3	374.2	373.1	376.5	378.6	366.6	372.8
10°	543.5	524.0	519.9	495.0	466.7	461.9	459.8	446.9	436.3	427.4	397.7
12.5°	605.6	605.3	612.8	576.9	572.5	577.3	575.6	529.1	518.6	481.4	472.8
15°	688.2	708.7	676.3	646.2	608.0	624.4	620.0	590.3	583.1	557.8	521.3
17.5°	773.9	779.4	725.1	679.0	669.1	647.6	652.0	641.5	605.3	625.4	589.2
20°	776.0	787.9	729.9	653.8	684.1	683.1	683.5	673.2	625.4	672.5	639.4
22.5°	804.6	775.3	721.3	672.9	678.3	683.5	688.9	676.3	666.0	677.7	683.8
25°	793.0	781.4	729.5	697.5	692.3	696.4	697.8	713.8	707.4	735.3	720.0
27.5°	823.1	806.4	713.5	719.3	701.2	696.4	688.2	741.8	760.9	738.8	779.7
30°	874.6	872.2	741.1	749.7	735.7	693.7	715.5	785.5	809.4	795.8	845.6
32.5°	955.2	963.4	822.1	766.8	773.9	792.7	784.5	785.5	846.0	876.3	915.9
35°	1069.6	1065.1	900.9	831.6	794.1	797.1	808.7	864.4	942.6	940.5	982.5
37.5°	1294.2	1245.7	1040.5	897.8	909.1	924.5	915.9	990.7	998.2	1000.9	1101.3
40°	1625.3	1560.8	1260.7	1037.5	928.9	996.8	992.8	1011.2	1061.4	1080.1	1226.6
42.5°	2061.6	1974.9	1648.2	1294.2	1024.5	977.7	1003.0	1037.8	1206.5	1260.1	1420.5
45°	2543.7	2368.2	2034.7	1660.2	1264.2	1119.1	1138.2	1203.0	1436.9	1525.7	1702.8
47.5°	2856.0	2701.7	2417.4	1984.5	1514.0	1437.9	1439.6	1453.6	1707.6	1872.2	2109.8
50°	3127.4	2963.2	2699.3	2323.5	1956.1	1812.1	1779.3	1714.8	2052.4	2277.4	2540.9
52.5°	3510.5	3318.6	2981.3	2721.2	2460.4	2121.0	2109.4	2131.3	2459.0	2695.6	2983.0
55°	3856.0	3622.8	3300.9	3137.0	3035.3	2575.1	2585.0	2621.5	2981.0	3106.3	3376.3
57.5°	4008.6	3755.9	3590.4	3516.6	3462.3	3195.4	3161.9	3140.1	3392.7	3440.5	3788.4
60°	4108.6	3868.2	3793.1	3810.2	3974.8	3691.4	3661.0	3534.0	3733.4	3772.7	4157.7
62.5°	4045.4	3826.3	3842.3	3984.7	4349.9	4163.5	4075.8	3863.5	4012.0	4043.7	4423.0
65°	3647.7	3419.3	3625.5	3970.0	4636.0	4631.6	4591.0	4167.6	4166.3	4206.9	4443.5
67.5°	2979.6	2740.0	3073.5	3694.8	4624.1	4915.3	4896.2	4571.2	4188.5	4079.9	4009.9
70°	2071.5	1863.6	2241.9	3051.3	4212.0	4913.2	4882.5	4842.2	4013.0	3511.8	3109.0
72.5°	1076.4	962.0	1314.3	2102.6	3357.5	4316.8	4418.2	4352.0	3426.5	2551.5	1830.9
75°	365.6	328.1	542.1	1116.0	2232.0	3296.4	3415.2	3348.0	2327.2	1369.0	724.1
77.5°	141.7	131.8	194.2	453.0	1119.7	2008.7	2137.8	2069.1	1248.1	501.5	170.4
80°	80.6	77.8	107.2	204.1	493.6	999.2	1090.0	988.7	449.9	169.0	44.4
82.5°	34.1	35.2	59.7	110.3	248.2	352.7	393.3	358.8	188.4	115.7	16.4
85°	7.5	9.2	28.3	61.4	104.1	100.7	105.5	117.1	115.7	85.0	7.2
87.5°	0.0	0.0	8.9	16.7	24.9	16.4	13.0	22.9	35.5	34.1	3.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6
2.5°	250.2	246.8	225.3	223.9	225.3	221.6	221.2	213.4	214.0	231.8	233.2
5°	311.7	294.6	276.2	270.4	264.9	252.6	259.5	259.5	259.5	270.7	274.1
7.5°	367.3	344.5	318.5	296.7	275.5	260.1	270.7	278.2	282.7	297.3	304.2
10°	392.6	370.1	346.8	315.8	299.4	293.6	281.3	274.8	282.7	279.6	283.4
12.5°	446.5	426.0	386.1	354.0	341.7	321.9	285.7	260.5	243.7	241.0	240.3
15°	499.1	486.5	432.9	389.9	347.2	301.4	239.7	206.2	188.4	185.4	185.7
17.5°	565.7	547.6	468.7	406.9	334.6	252.3	185.0	156.4	155.0	162.5	163.2
20°	610.1	580.4	486.8	392.9	292.9	190.8	144.7	137.9	148.8	162.5	161.1
22.5°	652.4	620.3	510.7	380.6	227.0	144.7	133.1	133.8	143.0	157.7	161.5
25°	680.4	668.8	540.1	352.0	173.1	125.3	127.3	132.5	140.3	154.3	154.3
27.5°	764.7	710.4	536.7	296.3	133.1	116.8	121.5	128.0	132.1	148.8	150.6
30°	815.9	798.2	554.4	239.7	116.8	105.8	115.0	120.9	123.6	142.7	143.4
32.5°	878.7	839.5	575.9	176.8	108.6	105.1	103.1	107.5	115.4	132.1	133.1
35°	955.2	943.6	545.2	138.9	105.8	98.3	94.2	96.6	101.7	113.0	115.4
37.5°	1111.2	1042.3	526.8	119.1	105.8	95.9	91.5	85.3	86.0	93.9	98.3
40°	1242.6	1221.5	475.2	115.7	101.1	92.5	81.6	74.1	69.0	71.3	73.1
42.5°	1484.0	1386.0	408.6	114.0	96.6	83.6	69.3	61.4	53.6	54.3	57.0
45°	1776.9	1565.6	349.2	112.3	93.5	74.8	58.4	49.2	41.0	41.3	44.0
47.5°	2168.1	1827.4	277.2	107.2	88.1	66.6	47.1	37.6	32.8	33.8	36.2
50°	2612.6	2057.2	219.2	99.3	81.6	58.7	38.2	30.4	28.7	29.7	32.4
52.5°	3009.7	2226.5	180.9	92.2	72.4	47.8	32.1	27.0	26.3	27.0	29.0
55°	3362.7	2324.8	151.2	84.0	62.1	38.6	29.0	24.9	24.6	24.2	25.6
57.5°	3693.8	2353.2	118.1	71.0	50.5	33.5	27.0	23.2	22.5	21.5	22.5
60°	3935.2	2304.7	86.7	57.0	41.3	30.4	25.3	20.8	19.8	18.1	18.8
62.5°	4051.6	2171.9	65.5	45.7	35.2	27.7	22.5	18.1	16.7	14.7	15.0
65°	3941.0	1953.1	51.5	38.6	30.0	23.2	19.1	15.4	13.7	11.6	11.6
67.5°	3451.1	1620.2	43.7	33.5	25.3	19.8	15.7	14.0	11.3	9.6	9.2
70°	2533.1	1165.5	37.6	29.4	21.8	17.1	13.3	12.6	10.9	9.2	8.5
72.5°	1429.7	659.6	32.1	25.9	18.4	14.3	11.3	11.6	10.6	8.5	7.9
75°	545.5	222.2	26.6	21.5	15.0	10.9	9.6	9.6	9.6	7.2	6.1
77.5°	135.2	56.7	21.2	17.4	11.9	7.2	7.9	8.2	8.2	6.1	4.4
80°	37.2	19.1	12.6	12.6	8.5	4.1	5.5	5.5	4.4	2.0	0.0
82.5°	13.7	7.2	4.4	5.5	3.8	1.4	2.0	1.4	1.0	0.0	0.0
85°	5.8	3.8	2.7	3.1	1.7	0.0	0.3	0.7	0.0	0.0	0.0
87.5°	2.4	1.7	1.4	1.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)